

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

47. (Currently Amended) A method for detecting an aptazyme reaction, the method comprising the steps of:

providing ~~a substrate comprising~~ a solid support ~~and having~~ a heterogeneous mixture of aptazyme constructs covalently immobilized ~~on the solid support thereon~~;

providing at least one analyte;

providing a nucleic acid substrate tagged to be detectable;

exposing the nucleic acid substrate and at least one analyte to the immobilized aptazymes, whereby activation of the aptazyme reaction by the analyte produces a signal when the nucleic acid substrate is bound to the immobilized aptazymes ~~upon activation of the aptazyme reaction by the analyte to produce a signal~~;

washing unbound substrate off of the ~~substrate~~ solid support; and

detecting the signal from the bound nucleic acid substrate.

48. (Original) The method of claim 47, wherein the method is automated.

49. (Original) The method of claim 47, wherein the signal is amplified for detection.

54. (Currently Amended) The method of claim 47, wherein the nucleic acid substrate tagged to be detectable is fluorescently tagged, tagged with a magnetic particle, or tagged with an enzyme.

55. (Previously Presented) The method of claim 47, wherein the solid support is a bead or a well in a multiwell plate.

56. (Previously Presented) The method of claim 55, wherein the solid support is a bead in a well of a multiwell plate.

57. (Previously Presented) The method of claim 56, wherein each well contains a bead with an aptazyme construct immobilized thereto which is different from the aptazyme constructs immobilized on the beads located in the other wells of the multiwell plate.
58. (Previously Presented) The method of claim 47, wherein the analyte is a metabolite or a protein.
59. (Currently Amended) A method for detecting an aptazyme reaction, the method comprising the steps of:
- providing a ~~substrate comprising a solid support having and an aptazyme construct covalently immobilized on the solid support thereon;~~
 - providing at least one analyte;
 - providing a nucleic acid substrate tagged to be detectable;
 - exposing the nucleic acid substrate and at least one analyte to the immobilized ~~aptazymes~~ aptazyme, whereby activation of the aptazyme reaction by the analyte produces a signal when the nucleic acid substrate is bound to the immobilized aptazymes ~~aptazyme upon activation of the aptazyme reaction by the analyte to produce a signal;~~
 - washing unbound nucleic acid substrate off of the ~~substrate solid support;~~ and
 - detecting the signal from the bound nucleic acid substrate.
60. (Previously Presented) The method of claim 59, wherein the method is automated.
61. (Previously Presented) The method of claim 59, wherein the signal is amplified for detection.
62. (Currently Amended) The method of claim 59, wherein the nucleic acid substrate tagged to be detectable is fluorescently tagged, tagged with a magnetic particle, or tagged with an enzyme.

63. (Previously Presented) The method of claim 59, wherein the solid support is a bead or a well in a multiwell plate.

64. (Previously Presented) The method of claim 63, wherein the solid support is a bead in a well of a multiwell plate.

65. (Previously Presented) The method of claim 59, wherein the analyte is a metabolite or a protein.

66. (Previously Presented) A method for detecting an analyte in a sample suspected of containing said analyte by detecting the binding of an aptazyme to a substrate, the method comprising the steps of:

providing an array having one or more aptazyme constructs disposed thereon at discrete locations by immobilization of said aptazyme constructs on a solid support;

contacting said aptazyme constructs with a substrate tagged with a detectable label, wherein said aptazyme constructs bind to said tagged substrate in the presence of said analyte, but do not bind to said tagged substrate in the absence of said analyte;

contacting said aptazyme constructs and substrate with in a sample suspected of containing said analyte under conditions which allow for substrate binding;

washing away unbound substrate;

detecting the bound substrate, thereby determining the presence of analyte in said sample.